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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/774,621	02/01/2001	Katsumi Kanehira	202686US2TTC	8152
22850	7590	03/17/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			LAU, TUNG S	
			ART UNIT	PAPER NUMBER
			2863	
DATE MAILED: 03/17/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/774,621

Applicant(s)

KANEHIRA ET AL.

Examiner

Tung S Lau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) 36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 15, 18, 19 and 37 is/are rejected.
- 7) ☒ Claim(s) 4-14, 16, 17, 20-35 and 38-45 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Applicant's election with traverse in 12-15-2003 is acknowledged. The traversal is on the ground(s) that search already done on prior to RCE filing. This is not found persuasive because the inventions are distinct, each from the other because of the following reasons:

Invention I and II are related as combination (invention I) and subcombination (invention II). Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particular of the subcombinations as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because Invention II, the combination as claimed does not required deterioration index value to determine metal corrosion. The subcombination (invention II) has separate utility such as a using deterioration index value to calculate metal corrosion.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 19, 3, 15, 18, 37 are rejected under 35 U.S.C. 102(b) as being anticipated by Kondou et al. (U.S. Patent 5,221,893).

Regarding claim 1:

Kondou discloses a deterioration diagnosis method, comprising the steps of formulating a corrosion loss of a metallic material to exposure days under an atmospheric condition as a function of environmental assessment points which represent a level of harmfulness of said atmospheric condition (Col. 9, Lines 3-16); and diagnosing a life span of said metallic material based upon said corrosion loss calculated by using said function (fig. 2, 3, 6).

Regarding claim 2:

Kondou discloses a deterioration diagnosis method, comprising the steps of: formulating a corrosion speed of a metallic material under an atmospheric condition as a function of environmental assessment points which represent a level of harmfulness of said atmospheric condition (Col. 9, Lines 3-16), and diagnosing a life span of said metallic material based upon said corrosion speed calculated by using said function (fig. 2, 3, 6).

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Regarding claim 19:

Kondou discloses 1a deterioration diagnosis equipment, comprising: an input unit for inputting a measured value of an amount of each environmental factor measured by an environmental factor amount measurement unit (Col. 9, Lines 3-16); a first database for storing a function giving a relationship to an amount of each environmental factor and assessment points for each factor (fig. 5, unit S1), a second database for storing function giving relationships between environmental measurement points and assessment points for each factor for each type of metallic material, a plurality of assessment points for each factor calculation unit for calculating said assessment points for each factor using said function read out from said first database and an amount of each environmental factor input by said input unit (fig. 5, unit S6); an environmental assessment points calculation unit for calculating environmental assessment points which represent a level of the harmfulness of an atmospheric environment using said function read out from said second database and each environment factor calculated by said assessment points for each factor calculation (fig. 5, unit S6); a corrosion loss calculation unit for calculating a relationship between an amount of corrosion loss of said metallic material under said atmospheric environment and a number of exposure days using a function in which environmental assessment points calculate by said environmental assessment points calculation unit are formulated as a variable (fig. 5, unit S6); a corrosion speed calculation unit for calculating said corrosion speed of a metallic material under

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said atmospheric environment using a function in which said environmental assessment points calculated by said environmental assessment points calculation unit are formulated as a variable; a corrosion loss correction calculation unit for correcting said relationship between said corrosion loss and said number of exposure days calculated by said corrosion loss calculation unit based on said corrosion loss of said metallic material in said number of exposure days of said prescribed period (fig. 6); a corrosion speed calculation unit for correcting said corrosion speed calculated by said corrosion speed calculation mean based on said amount of corrosion loss of said metallic material in said number of exposure days of said prescribed period; a remaining life span calculation unit for calculating a remaining life span of said metallic material based on said relationship between said corrosion loss corrected by said corrosion loss correction unit and said number of exposure days (fig. 6), or based on said corrosion speed corrected by said corrosion speed correction unit; and an output unit for outputting said remaining life span of each metallic material calculated by said remaining life span calculation unit as diagnosis result (fig. 7, 8).

Regarding claims 3, 15, 18, 37:

Kondou discloses using multiplication factor of environment factors including humidity, temperature, corrosive gas, sea particle in the environment (Col. 7-8, Lines 55-60, Col. 9, Lines 3-16); measure with specific period (fig. 2); corrosive

speed calculation is corrected (fig. 5, unit S6); configured to instruct a computer to carry out the calculation (fig. 1, 5).

### ***Claim Objections***

3. Claims 4-8, 11,12, 14,38-45, 16, 28, 29-35, 9, 10, 13, 17, 20-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitation of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: prior art fail to teach calculating using distance from the coast; the acid gas calculating using alkaline filter paper with potassium carbonate with %; using square root of number of expose days; linear expression of a square root of number of days; amount of weight loss due to exposure days; the material constituting an electronic circuit; using environmental classification.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung S Lau whose telephone number is 571-272-2274.

The examiner can normally be reached on M-F 9-5:30. If attempts to reach the

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examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 571-272-2269. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5841 for regular communications and 703-308-5841 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956. TC2800 FAX Telephone Numbers: 703-872-9306

TC2800 Customer Service FAX - (703) 872-9317

TL

*John Barlow*  
John Barlow  
Supervising Patent Examiner  
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